

REMARKS

Claims 1-16 are currently pending in the application, with claims 1 and 8 being independent. Applicants have amended claim 1 to more appropriately define the present invention. Applicants request the Examiner to reconsider the rejections set forth in the Office Action in light of the remarks and claim amendments presented herein, and earnestly seek timely allowance of the pending claims.

Allowable Subject Matter

The Examiner indicated in the Advisory Action dated August 17, 2006, that claims 4, 5, and 11-14 were directed to allowable subject matter, but were objected to as depending upon rejected base claims. Applicants appreciate the Examiner's indication of allowable subject matter.

Claim Rejections - 35 U.S.C. § 102

In the Advisory Action, the Examiner indicated that claims 1, 2 and 6 remain rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 4,477,785 to Atia ("Atia"). Applicants respectfully traverse the rejection and submit the Examiner has failed to establish a *prima facie* on anticipation.

Regarding claim 1, the Examiner asserts that "Atia discloses a filter comprising a plurality of series resonant circuits 40-46, 48-54 (see Figs. 6b, C1, L1, L2, C2) with one set of end terminals having a common connection and another set of end terminals" (see Office Action at page 4, paragraph 1). The Examiner additionally asserts that Atia "clearly shows that each of

the series resonance/dielectric resonator 40 one set of end terminals having a common connection through separated transmission line 70." The Examiner further asserted that in Fig. 6a Atia shows a series resonant circuit C1, L1 and C2, L2 shares a common connection via impedance Zo/transmission line 70.

Applicants submit that Atia fails to disclose "a plurality of series from resonant circuits with one set of end terminals having a common connection which is an equally potential node," as recited in claim 1.

Applicants submit that in Fig. 6a Atia shows two resonance circuits, each branch of the resonance circuit are separated by a circuit element. The upper branch is separated by a waveguide 1 and the lower branch of the circuit is separated by impedance Zo. In Fig. 6b, Atia discloses two series resonance circuits which do not have a common connection with an equal potential node, but are coupled through a mutual inductance M.

Accordingly, Applicants respectfully request the Examiner to withdraw the rejection of claim 1. Claims 2 and 6 depend from claim 1 and are allowable at least for the reasons provided above for the allowability of claim 1.

Claim Rejections - 35 U.S.C. § 103

Claims 8-10, 15, and 16 remain rejected under 35 U.S.C. § 103(a) as being unpatentable over Hong in view of Miyazaki or JP 07-094908 to Toshio¹. Applicants submit the Examiner has failed to establish a *prima facie* case of obviousness and traverse this rejection.

¹ In the Office Action, the Examiner cites "Toshio" as "Uchida." Applicants herein use "Toshio" to cite the reference to avoid confusion with "Uchida I" and "Uchida II," cited previously.

In the outstanding Office Action, the Examiner asserts that Toshio discloses a jump coupling circuit having a transmission/microstrip line 27 or 37 (see Fig. 4a) coupling two non-adjacent resonators 5, 7. (See Office Action, page 6, paragraph 3.)

Applicants respectfully submit that the Examiner is misinterpreting the teachings of Toshio. In Fig. 1a, Toshio teaches a lead wire 27 which connects between the first and second polar zone 25 and 26 (machine translation: paragraph [008]). Toshio further teaches two conductors 5 and 7 which are associated with polar zone 25 and 26 (machine translation: paragraph [009 - 0010]).

Toshio further discloses that quarter wavelength resonator filter pattern 8 consists of conductors 5, 6, and 7, wherein the filter pattern 8 is formed into the dielectric substrate. (Machine translation: paragraph [0010]).

The Examiner improperly jumps to the conclusion that Toshio clearly teaches that conductors 5 and 7 are resonators. Applicants respectfully submit that in paragraph [0010], Toshio discloses that the resonator is a quarter wavelength resonator filter pattern 8, which includes conductors 5, 6, and 7. The individual conductors 5 and 7 are not resonators in and of themselves, but these conductors, along with conductor 6 and other elements of the circuits, combine to form a single resonator circuit.

Accordingly, Applicants submit Hong and Toshio fail to teach or suggest, either separately or in combination, "a plurality of parallel resonance circuits each connected through separate transmission lines ... and a jump coupling circuit for coupling two non-adjacent parallel resonant circuits ... to each other," as recited in claim 8.

Regarding Miyazaki, the Examiner asserts that Miyazaki teaches "a similar filter having a jump-coupling circuit having a transmission/microstrip line 15 coupling two non-adjacent resonators 10a, 10d. (See Office Action page 6, paragraph 2.)

The Examiner further asserts that "one cannot show non-obviousness by attacking references individually where the rejections are based on combinations of references." (Office Action: page 8, paragraph 2.) Applicants respectfully submit that in order to establish a *prima facie* case of obviousness, the combination of the references must show each and every element of the claim. Applicants arguments traversing the obviousness and rejection merely point out the deficiencies of the references in specifying the elements of the claims which are not taught.

Applicants submit that Miyazaki merely teaches a resonator circuit having a number of stages of the filter defined by individual resonators 1a - 1d. The capacitor of the coupling units for a coupling adjacent first resonator 1 with each other, a second resonator 3 which is coupled with a capacitor means serving as a jump coupling means for coupling the first resonator and second resonator with each other. (See col. 8, line 62 through col. 9, line 4.) Series resonators 1a-1d are connected in series the capacitor coupling means 2. The first resonator 1a and 1d located at both ends of the series connection are connected to terminals P1 and P2 through the capacitive coupling means 5. The second resonator 3 is coupled to both first resonators 1a and 1d through the capacitor coupling means. (See col. 9, lines 5-11.)

Miyazaki shows detail of an individual resonator (for example 3, as shown in Fig. 1) in Fig. 22. Reference numerals 10a - 10d denote strip conductors having a conductive film formed in intimate contact with the other surface of the dielectric plate A. The strip conductors are arranged substantially and parallel as seen from the pattern shown in Fig. 22. (See col. 16, lines

18-21.) Miyazaki further teaches that reference numeral 15 denotes a strip conductor having a length of approximately one-quarter wavelength made of a conductive film and intimate contact with the other surface of the dielectric plate 8a and arranged in the vicinity of the open ends of the strip conductors 10a to 10d to cross them.

In the Office Action, the Examiner incorrectly asserts that Miyazaki teaches in Fig. 22 "a jump-coupling circuit having a transmission/microstrip line 15 coupling two non-adjacent resonators 10a, 10d. (See Office Action, page 6, paragraph 2.) The Examiner incorrectly asserts that 10a and 10b are resonators. This is in direct contradiction to the disclosure of Miyazaki, which states "[t]he dielectric plates 8a, 8b, outer conductors 9a,9b, strip conductors 10a to 10d, and short circuiting areas 11a, 11b constitute resonators 100a to 100d. These resonators 100a to 100d correspond to the first resonators 1a to 1d in Fig. 1 and others" (col. 16, lines 55-59.)

Accordingly, Applicants submit that neither Hong or Miyazaki teach or suggest, either separately or in combination, "a plurality of parallel resonant circuits each connected through separate transmission lines ... and a jump-coupling circuit for coupling the two non-adjacent parallel resonant circuits ... to each other," as recited in claim 8.

In summary, Hong, Miyazaki and Toshio either separately or in any combination, fail to teach all of the elements of claim 8. Applicants respectfully request the Examiner to withdraw the rejection of claim 8. Claims 9-10, 15, and 16 depend from claim 8 and are allowable at least by virtue of their dependency from allowable claim 8.

The Examiner rejected claims 3 and 7 under 35 U.S.C. § 103(a) as being unpatentable over Atia in view of Wakino. Applicants disagree and respectfully traverse this rejection. Claims 3 and 7 depend from claim 1 and include all of the features recited therein.

Wakino fails to cure the deficiencies of Atia in this respect. Atia merely shows a parallel connection multistage band pass filter having an input terminal and an output terminal for signals, a plurality of resonators respectfully having resonator frequencies different from and close to one another which are dielectrically connected in parallel to each other between said input and output terminals. Accordingly, Applicants respectfully request the Examiner to withdraw the rejections of claims 3 and 7.

Conclusion

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Michael K. Mutter, Reg. No. 29,680 at the telephone number of the undersigned below, to conduct an interview in an effort to expedite prosecution in connection with the present application.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37.C.F.R. §§1.16 or 1.14; particularly, extension of time fees.

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Respectfully submitted,

By 

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